IN THE SPECIFICATION

Please make the following changes to the specification

Please change paragraph 0076 as follows:

[0076] Due to the seasonal nature of agricultural biomass production and due to the isolated nature of farm fields throughout the world (they are most probably far removed from electric power transmission lines), it may be preferable to convert all the volatile matter in the biomass to hydrogen. The hydrogen conversion method is described below in connection with the hydrogen production and carbon dioxide sequestration of coal, as per FIG. 4. This would allow the use of the hydrogen as a transportation fuel. Since biomass is a renewable fuel, there would be no need for the carbon dioxide sequestration step that is needed for coal. This would greatly simplify and reduce the cost of the entire process, and greatly increase its economic value, especially to the farmers to the point where ~~they~~ their income from crops such as corn could double from current (2003) grain prices by sale of the hydrogen and carbon emission credits. The hydrogen would be compressed to high pressure levels, e.g. 5000 psi, using the steam within the hydrogen production process and further compression of gaseous hydrogen for sale as a transportation fuel. The residual char as well as a small fraction of the hydrogen or of the carbon released in the volatiles would be fired in the combustor of a boiler to calcine the calcium carbonate and to generate the steam that is used in the hydrogen production process in a high pressure boiler, as will be described below with respect to FIG. 4.

Please change paragraph 0082 as follows:

[0082] The following discussion on ~~carbons equestration~~ carbon sequestration utilizes as an example an existing coal fired power plant that is originally rated at 100 MWe output. It is modified to practice this invention of hydrogen production and carbon sequestration. When the hydrogen is utilized to drive a combined gas turbine/steam turbine power plant, the power output of the modified plant is doubled. All the numbers cited in the example apply to this modified power plant.

Please change paragraph 0145 as follows:

[0145] After mixing of the biomass volatiles, the calcium oxide, and steam in the hydrogen producing reactor 431 in FIG. 4 the reacted CaCO.sub.3 drops through a lock hopper and is pneumatically conveyed at a slightly above atmospheric pressure to the top of the calciner vessel 41 for re-calcination therein. The hydrogen passes through the sand filter 432, which now incorporates a cooler for removal of any liquids or solids prior to entering the components 4323 in FIG. 4 (not shown in detail as this is well known equipment) for processing the hydrogen for shipment. The gas is cooled to ambient temperature and compressed to 5000 psig or more depending on the vessel technology with a multi-stage compressor and intercooling and stored in high pressure shipping cylinders. The sand 4321 at the bottom of the sand filter is removed for cleaning or disposal or injection into the combustor 411 for recovery of the energy of the organic compounds mixed in with the sand.